

NECROPHILIA IN *TILIQUA RUGOSA*: A DEAD END IN EVOLUTION?

By R.D. SHARRAD

Conservation and Park Management, University of South Australia, Smith Road, Salisbury East, SA., 5109,

D.R. KING

c/o Western Australian Museum, Francis St., Perth, WA., 6000,

and P.T. CAIRNEY

Australian Road Research Board, PO Box 156, Nunawading, Vic., 3131.

INTRODUCTION

We were driving along the minor roads of the Eyre peninsula in South Australia in October 1971. Our purpose was to collect Shingleback (Bobtail) Lizards (*Tiliqua rugosa*) and obtain ticks (*Amblyomma albolimbatum* and *Aponomma hydrosauri*) from them in order to elucidate biogeographic problems. These studies have been reported elsewhere (Bull *et al*, 1981).

OBSERVATIONS

At 1345 on October 31 1971 we were 3.8 km from Arno Bay, on the road from Cleve. We came upon a male *Tiliqua rugosa* attempting to mate with a somewhat unenthusiastic female of that species (Figure 1). The reason for her lack of enthusiasm was that she had been freshly killed, probably when a car had driven over her head.

The cloacal temperature of the male was 33.2°C, while that of the female was 34.5°C. Air temperature was 19.2°C. Both animals were heavily infested with ticks (*Amblyomma albolimbatum*). Many other *Tiliqua*

rugosa, often in pairs, were captured on that day. The mean temperature of the 27 *Tiliqua rugosa* captured between 1040 and 1655 was 33.9°C (SE = 1.6°C). Air temperature during those 6 hours ranged from 19.5 to 25.5°C. All *Tiliqua rugosa* we captured were infested with ticks (*Amblyomma albolimbatum* and/or *Aponomma hydrosauri*).

DISCUSSION

Many *Tiliqua rugosa* are killed on roads in southern Australia during their breeding season. In the context of a national commitment to ecologically sustainable development policies, while road authorities have a responsibility to do what they can to maintain biodiversity, it is not obvious what economically justifiable action they can take to provide increased opportunity for drivers to safely manoeuvre around wildlife on minor roads in remote areas. Training drivers on the issue of avoiding collisions with wildlife may be necessary.

To the best of our knowledge, there have been no other reported cases of



Figure 1. Male Shingleback attempting to mate with a recently dead female.

necrophilia in *Tiliqua rugosa* in any circumstances. We therefore do not know whether or not this phenomenon is restricted to roadsides, or how frequently it occurs. We do know that both of the participants in the incident we witnessed had cloacal temperatures within the range of active animals captured that day, which may indicate some degree of temperature preference by the male. The time of death of the female is unknown.

The only other report of possible necrophilia in reptiles of which we are aware was of three unsuccessful attempts at copulation in "Rhodesia" (Zimbabwe) in September 1965 by a male *Varanus albigularis* with a female which had died a few hours

previously (Lambiris 1966). The male gave up and left the scene after three attempts when the dead female (not surprisingly) failed to respond to him nuzzling along her hind legs and caressing her. The male returned after a few hours and tried to court the dead female again, without success (Lambiris 1966). It is not known whether the male had previously been successful in copulating with the dead female.

Although its growth has been uneven, there is an increasing trend in road use (Australian Bureau of Statistics 1982–1991). Increased traffic may result in increased reptile road deaths, and hence increasing incidence of necrophilia amongst reptiles. Whether this will be

sufficient to result in a significant change in the reproductive behaviour of any particular species of reptile or not is unknown, but we feel confident in stating that its impact on the evolution of reproduction in reptiles will be nil.

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